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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,920	02/06/2004	Steven D. Looman	100204906-1	8860

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EXAMINER

JOLLEY, KIRSTEN

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/774,920

Applicant(s)

LOOMAN ET AL.

Examiner

Kirsten C. Jolley

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13, 15-20 and 31-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-13 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 31, 33-43 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendments/Arguments

1. The 35 USC 112, 2nd paragraph rejections set forth in the prior Office action have been withdrawn in response to Applicant's amendments to the claims and arguments.
2. The 35 USC 102(e) and 103(a) rejections of claims 11-13 and 15-20 over Kaneko et al. have been withdrawn in response to Applicant's amendments to the claims and corresponding arguments. The specification discloses that chemical attachment between the sulfur-containing compound and inorganic metal oxide or semi-metal oxide particulates requires more than merely admixing of the ingredients, but rather requires a reaction between the sulfur-containing compound and particulates. The prior art does not teach or suggest such a reaction to form an attachment; the prior art only teaches admixing the compounds.
3. With respect to new claims 31-43, rejections are made over the newly cited prior art of Tsuchida et al. and over Kaneko et al. taken in view of Tsuchida et al. for the reasons discussed below. Accordingly, this rejection is made non-final.

Claim Objections

4. Claim 40 is objected to because of the following informalities: The period is missing at the end of claim 40. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 39 recites the limitation "the sulfur-containing compound" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 38 and 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuchida et al. (US 2002/0071941).

Tsuchida et al. discloses a method of preparing a media sheet comprising: applying a porous ink-receiving layer to a media substrate, said ink-receiving layer including silica or alumina particulates (paragraphs 0035-0036), a polymeric binder (paragraph 0039), and an effective amount of a thiodiethanol that interacts with ozone upon exposure thereto (paragraphs 0014 and 0027); and drying the ink-receiving layer. While Tsuchida et al. additionally teaches

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use of other components in its composition, Applicant's broad "comprising" language reads on Tsuchida et al.'s method.

As to claim 41, Tsuchida et al. teaches use of a mordant in paragraph 0038.

As to claim 43, Tsuchida et al. teaches similar polymeric binders in paragraph 0039.

9. Claims 31 and 33-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaneko et al. (US 6,551,695).

Kaneko et al. discloses a method of preparing a media sheet comprising: applying a porous ink-receiving layer to a media substrate, said ink-receiving layer including silica particulates (col. 2, lines 14-42), a polymeric binder (col. 2, line 64 to col. 3, line 7), and an effective amount of a thioether that interacts with ozone upon exposure thereto (col. 3, lines 48-60 and col. 7-8); and drying the ink-receiving layer.

It is noted that independent claim 31 reads on applying two coats of the same ink-receiving layer onto a media substrate. Applicant argues that claim 31 requires sequentially applying the materials in separate coatings, however the Examiner notes that Applicant's "comprising" language broadly reads on sequentially applying two coats, where both coats contain the sulfur-containing compound and particulates and binder. Kaneko et al. states in col. 26, lines 34-35 that two or more layers of the ink-receiving layer may be applied.

As to claim 33, Kaneko et al. teaches use of a mordant or fixing agent in col. 24, line 63.

As to claim 35, Kaneko et al. teaches use of polyvinyl alcohol as the polymeric binder.

Claim Rejections - 35 USC § 103

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10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 31, 33-37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida et al.

Tsuchida et al. is applied for the reasons discussed above in section 8. It is noted that independent claim 31 and dependent claim 40 read on applying two coats of the same ink-receiving layer onto a media substrate. Applicant argues that claim 31 requires sequentially applying the materials in separate coatings, however the Examiner notes that Applicant's "comprising" language broadly reads on sequentially applying two coats, where both coats contain the sulfur-containing compound and particulates and binder. Tsuchida et al. states "forming ink-receiving layers" in paragraph 0042. Further, it is the Examiner's position that it would have been obvious to have applied two or more thinner layers of the ink-receiving layer of Tsuchida et al. with the expectation of similar results as applying one thicker layer, particularly since Tsuchida et al. teaches that the coating thickness should be greater than 2 g/m² or quality will be impaired. It is the Examiner's position that there is no criticality in splitting one step into two unless a new and unexpected result is produced.

12. Claims 37, 38, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. as applied to claims 31 and 33-36 above, and further in view of Tsuchida et al.

Kaneko et al. is applied for the reasons discussed above in section 9. Kaneko et al. lacks the teaching of using a thiodiethanol as the compound that interacts with ozone upon exposure. Tsuchida et al. is cited for its teaching of multiple sulfur-containing compounds which prevent yellowing of the media sheet, including the use of thiodiethanol, as discussed above. It would have been obvious for one having ordinary skill in the art to have used thiodiethanol as the sulfur-containing compound in the method of Kaneko et al. upon seeing the prior art of Tsuchida et al. with the expectation of successful results because both references similarly incorporate sulfur-containing compounds in order to prevent yellowing of the product.

Dependent claims 40-43 are rejected for similar reasons as discussed above for claims 31 and 33-35.

Allowable Subject Matter

13. Claims 11-13 and 15-20 are allowed. The prior art does not teach or suggest such chemically attaching the sulfur-containing compound to the inorganic metal oxide or semi-metal oxide particulates; the prior art only teaches admixing the compounds. The instant specification discloses that chemical attachment between the sulfur-containing compound and inorganic metal oxide or semi-metal oxide particulates requires more than merely admixing of the ingredients, but rather requires a reaction between the sulfur-containing compound and particulates.

14. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 32 is allowable for the same reasons discussed above.

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15. Claim 39 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claim 39 is allowable for the same reasons discussed above.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C. Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Kirsten C Jolley
Primary Examiner
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kcj